

#### **READ THIS BOOK**

ACAUTION: Read the Operator's Manual before using the appliance.

This book has important information for the use and safe operation of this machine. Failure to read this book prior to operating or attempting any service or maintenance procedure to your ALTO machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If operator(s) cannot read this manual, have it explained fully before attempting to operate this machine.

Si Ud. o sus operadores no pueden leer el Inglés, se hagan explicar este manual completamente antes de tratar el manejo o servicio de esta máquina.

All directions given in this book are as seen from the operator's position at the rear of the machine.

For new books write to: ALTO U.S. Inc., 2100 Highway 265, Springdale, Arkansas 72764.

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#### OPERATOR SAFETY INSTRUCTIONS

WARNING

**AVERTISSEMENT** 

**ADVERTENCIA** 

DANGER: Failure to read and observe all DANGER statements could result in

severe bodily injury or death. Read and observe all DANGER statements found in your Owner's Manual and on your machine.

**WARNING:** Failure to read and observe all WARNING statements could result

> in injury to you or to other personnel; property damage could occur as well. Read and observe all WARNING statements found in

your Owner's Manual and on your machine.

A CAUTION:

Failure to read and observe all CAUTION statements could result in

damage to the machine or to other property. Read and observe all CAUTION statements found in our Owner's Manual and on your

machine.

DANGER:

Failure to read the Owner's Manual prior to operating or attempting any service or

maintenance procedure to your Clarke Technology machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If you or your operator(s) cannot read English, have this manual explained fully before

attempting to operate this machine.

DANGER:

Operating a machine that is not completely or fully assembled could result in injury

or property damage. Do not operate this machine unless it is completely

assembled. Inspect the machine carefully before operation.

**DANGER:** 

Machines can cause an explosion when operated near flammable materials and vapors. Do not use this machine with or near fuels, grain dust, solvents, thinners,

or other flammable materials. This machine is not suitable for picking up hazardous dust. Use only commercially available floor cleaning waxes intended for machine

operation.

**DANGER:** 

Lead acid batteries generate gases which can cause an explosion. Keep sparks and flames away from batteries. Do not smoke around the machine. Charge the batteries only in an area with good ventilation. Make sure that the AC charger plug is unplugged from the wall receptacle before connecting or disconnecting the DC

plug to or from the battery pack.

**DANGER:** 

Working with batteries can be dangerous! Always wear eye protection and protective clothing when working near batteries. Remove all jewelry. Do not put

tools or other metal objects across the battery terminals, or the tops of the

batteries.

DANGER:

Using a charger with a damaged power cord could result in an electrocution. Do

not use the charger if the power cord is damaged.

WARNING:

Operating this machine from anywhere other than the back of the machine could result in

injury or damage. Operate this machine only from the rear.

**WARNING:** This machine is heavy. Get assistance before attempting to transport or move it. Use

two able persons to move the machine on a ramp or incline. Always move slowly. Do not turn the machine on a ramp. Do not use on surfaces having a gradient exceeding that marked on the appliance. Read the "Procedures For Transporting" in this manual before

transporting as machine might topple over if not secured.

**WARNING:** 

Machines can topple over and cause injury or damage if guided over the edges of stairs or

loading docks. Stop and leave this machine only on a level surface. When you stop the machine, put all switches into their "OFF" position. Turn the key switch "OFF" and

remove the key.

A

**WARNING:** Maintenance and repairs performed by unauthorized personnel could result in damage or

injury. Maintenance and repairs must be performed by authorized Clarke Technology

personnel only.

 $\mathbf{A}$ 

WARNING: Any alterations or modifications of this machine could result in damage to the machine or

injury to the operator or other bystanders. Alterations or modifications not authorized by

the manufacturer voids any and all warranties and liabilities.

MAI WAI

WARNING: Electrical components of this machine can "short-out" if exposed to water or moisture.

Keep the electrical components of the machine dry. Wipe the machine down after each use. This appliance is for dry use only and is not to be used or stored outdoors in wet

conditions.

 $oldsymbol{\Lambda}$ 

WARNING: Operating a machine without observing all labels and instructional information could result

in injury or damage. Read all machine labels before attempting to operate. Make sure all of the labels and instructional information are attached or fastened to the machine. Get

replacement labels and decals from your Clarke Technology distributor.

A WARNI

WARNING: Wet floor surfaces can be slippery. Water solutions or cleaning materials used with this

type of machine can leave wet areas on the floor surface. These areas can cause a dangerous condition for the operator or other persons. Always put "Caution" signs

around/near the area you are cleaning.

WARNING:

Improper discharge of waste water may damage the environment and be illegal.

The United States Environmental Protection Agency has established certain regulations regarding discharge of waste water. City, state and national regulations regarding this discharge may also be in effect in your area. Understand and follow the regulations in

your area. Be aware of the environment hazards of chemicals that you dispose.

A

WARNING: Only use the brushes provided with the appliance or those specified in the Operator's

Manual. The use of other brushes may impair safety.

**CAUTION:** 

CAUTION:

Use of this machine to move other objects or to climb on could result in injury or damage.

Do not use this machine as a step or furniture. Do not ride on this machine.

A

Your machine warranty will be voided if anything other than genuine Clarke Technology

parts are used on your machine. Always use Clarke Technology parts for replacement.

 $\Lambda$ 

**CAUTION:** This machine contains lead acid batteries. The batteries must be disposed of in an

environmentally acceptable manner.

#### **Introduction & Machine Specifications**

#### **Introduction & Machine Specifications**

Clarke Technology's newly designed Encore L26 Cylindrical automatic scrubber is an efficient and superior floor cleaning machine. The Encore uses two brushes to scrub and sweep a path 26 inches wide. A squeegee wipes the floor while the vacuum motor removes the dirty solution from the floor - all in one pass.

The Encore L26 Cylindrical comes complete with four - 6 volt batteries, one battery charger, two brushes and one operator's manual.

#### **SPECIFICATIONS:**

| SPECIFICATIONS:             |  |  |
|-----------------------------|--|--|
| Model                       | Encore L26 Cylindrical   |  |
| Machine Power Supply        | 24 Volt D.C.,  |  |
| ,                           | (4) 6V 250 AH Deep Cycle Batteries or                                    |  |
|                             | (4) 6V 330 AH Deep Cycle Batteries                                       |  |
|                             |  |  |
| Pad or Brush                | 26" Cylindrical  |  |
| 2 per machine               |  |  |
| Traverse                    | 0.5 hp (0.4 kW) Transaxle  |  |
| Traverse Forward Speed      | Variable to 250 ft./min (76 m/min)                                       |  |
| Traverse Reverse Speed      | Variable to 190 ft./min. (58 m/min)                                      |  |
| Battery Protection          | Low Voltage  |  |
| Motor Vacuum                | 3/4 HP, 3 stage, Acoustical High Efficient Tangential                    |  |
| Solution Tank               | 20 Gallons (76 liters)   |  |
| Solution Level              | Calibrated level indicator on rear of machine                            |  |
| Recovery Tank               | 20 Gallons (76 liters)   |  |
| Recovery Full Indicator     | Electric Shut-Off  |  |
| Parabolic Squeegee          | Swing type with breakaway feature, No tool operation feature             |  |
|                             | 32 inches (81 cm) hard width with 34 inches (86 cm) flex blade width.    |  |
| Squeegee Operation          | Reverse direction on floor and 3 - position manual lever style operation |  |
| Cleaning Swath              | 26 inch (66 cm)  |  |
| Motor, Brush                | (2) 0.75 HP (0,56 kW)  |  |
| Brush / Pad Size            | (2) 4 inch (10 cm)   |  |
| Brush Speed                 | 1000 RPM   |  |
| Brush Pressure              | 0-100 lbs. / 0-45 kg.  |  |
| Brush Solution Retention    | Fiber Bristles   |  |
| Drive Wheels                | (2) 8 in. x 2 in. (20 cm x 5 cm) Neoprene tread                          |  |
| Caster                      | Dual 4 in. x 2 in. (10 cm x 5 cm)  |  |
| Charger                     | 24 V D.C., 25 Amp, 115/60 or 24 V D.C., 25 Amp, 230/50                   |  |
| Grade Cleaning              | 5 Degree (6%)  |  |
| Length                      | 56 inches (142 cm)   |  |
| Width                       | 28 inches (71 cm)  |  |
| Height                      | 43 inches (109 cm)   |  |
| Weight                      | 871 lb / 395 kg  |  |
| Line of Sigh (from Operator |  |  |
| Height): 68 inches (173 cm) | 7.5 feet (2.3 m)   |  |
| Warranty                    | Machine 3 Years, Polydur tanks- 8 years                                  |  |
|                             | Batteries-18 months, pro-rated   |  |
| Noise                       | 71 dBA   |  |
| Vibration                   | < 2.5 m/s <sup>2</sup>   |  |

#### **Procedures For Transporting**

#### How to Put the Machine Into a Van or Truck

WARNING:

This machine is heavy. Get assistance before attempting to transport or move it. Use two able persons to move the machine on a ramp or incline. Always move slowly. Do not turn the machine on a ramp. Do not stop and leave the machine on a ramp or incline. The loading ramp must be a minimum of 32" wide.



WARNING:

Machines can topple over if guided over the edges of stairs or loading docks and cause injury or damage. Stop and leave this machine only on a level surface. When you stop the machine, put all switches into their "OFF" position.

- 1. Make sure the loading ramp is at least eight (8) feet (2.5m) long and a minimum of 32" (0.8m) wide, and strong enough to support the machine.
- 2. Make sure the ramp is clean and dry.
- 3. Put the ramp in position.
- 4. Remove squeegee assembly, brush housing and brush or pad driver before loading. ALTO recommends that both the solution tank and recovery tank are empty before loading.
- 5. Turn key switch "ON".
- 6. Align the machine on a level surface five (5) feet (2 m) in front of the ramp.
- 7. Put the traverse knob at full speed.
- 8. Push in either one of the forward/reverse switches while pushing in the white reverse switch. Back the machine up the ramp. See figure 1.
- 9. Turn the key switch "OFF".

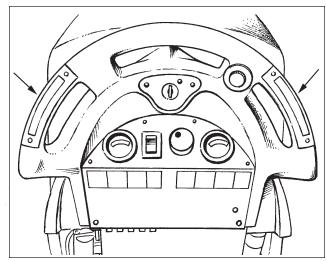


Figure #1

#### **Procedures For Transpoting (cont.)**

11. Fasten the machine to the vehicle. Clarke Technology recommends a strap over the top of the machine and a strap to keep the machine from rolling forward or backwards. If this is not done, there is a possibility of the machine toppling over. Four tie down points (2 along each side of frame) are provided on machine for securing machine.

# How to Remove the Machine From a Van or Truck

- 1. Make sure there are no obstructions in the area.
- Make sure the unloading ramp is at least eight (8) feet (2.5m) long and a minimum of 32" (0.8m) wide, and strong enough to support the machine.
- 3. Make sure the ramp is clean and dry.
- 4. Put the ramp in position.
- 5. Unfasten the machine.



WARNING: The machine is heavy.

Make sure you use two able persons to assist in moving the machine down the ramp.

- 6. Turn the key switch "ON".
- Set the traverse center knob to the slowest forward speed setting. Carefully and slowly, drive the machine to the top of the ramp and start down.
- 8. While pushing in the right or left forward/ reverse switch the machine will go forward. See figure 2.
- 9. As the machine begins to travel down the ramp, push in the forward/reverse switch to maintain a slow downward speed.
- 10. Replace squeegee assembly, brush housing, and brush or pad driver after machine is unloaded and ready to use.

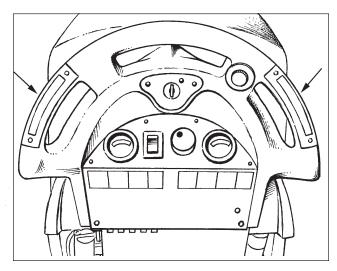


Figure #2

### SYMBOLS USED ON ENCORE L26 CYLINDRICAL

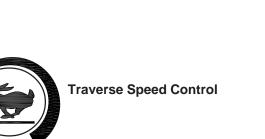


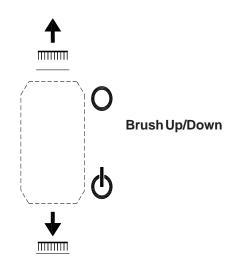
Warning

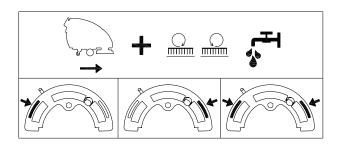




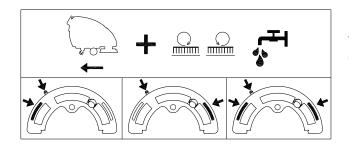
**Power** 







Traverse Directions Forward (Traverse and Solution, and Brush Rotation)



Traverse Directions Reverse (Traverse and Solution, and Brush Rotation)

### SYMBOLS USED ON ENCORE L26 CYLINDRICAL



Warning Label with parking brake

## RISK OF INJURY OR DAMAGE TO MACHINE

 Do not turn, stop, or leave machine on a ramp or dock.

WITH

operation.
Do not use flammable materials.



BRAKE



Warning Label without parking brake

#### **Machine Control Panel**

Key Switch (See Figure 3, Item "A")

The key switch turns "ON" the power to the control panel. "O" is "OFF" and "I" is "ON".

Forward Reverse Switch (See Figure 3, Item "B")

The forward/reverse switch turns the traverse motor "on" forward and if the brush motors are in the down position, activates the brush motors/solution control module. There is a two second delay for the pad motor to stop after releasing the switch. Either the right or the left switch can be used. Use either switch in conjunction with the white reverse switch to reverse the traverse motor.

Battery Meter (See Figure 3, Item "C")

The battery meter indicates the relative charge on the battery pack. Do not continue to run the machine when the needle is in the "red" area. This will shorten the life of the battery pack.

Brush Pressure Meter (See Figure 3, Item "D")

The brush pressure meter indicates the relative amount of pressure the brushes are putting on the floor. To maximize run time on a battery charge, keep the needle towards the center of the green area.

Reverse Switch (See Figure 3, Item "E")

The reverse switch, when used in conjunction with one of the forward/reverse switches, causes the machine to reverse directions. The reverse speed is 70% of the forward speed.

Hour Meter (Not Illustrated) (Option)

The hour meter indicates the number of hours the machine has operated. It runs only when the brush motor is on.

Circuit Breakers (See Fig 3, Items "F", "G", "H", "I" & "J")

The circuit breaker reset buttons are located on the rear cover. The breakers are located as follows:

Item F - Actuator Head (5 amp)
Item G - Vacuum Motor (30 amp)
Item H& I - Brush Motor (25 amp)
Item J - Traverse Motor (25 amp)

If a circuit breaker trips, determine which motor is not operating and turn the key switch "OFF". Wait five minutes and push the reset button back in. Turn the key switch "ON" and try again. An authorized service person should be contacted if the breaker trips again.

Control Handles (See Figure 3, Item "K")

The control handles are located at the rear of the machine. They are used to guide the machine.

Solution Control Knob (See Figure 3, Item "L")

The solution control knob regulates the flow of chemical solution to the floor. To increase the flow, turn knob clockwise. To decrease the flow, turn counter clockwise. Full counter clockwise is OFF and full clockwise is ON.

Traverse Speed Knob (See Figure 3, Item "M")
To increase speed, turn knob clockwise.

Brush Motor Switch (See Figure 3, Item "N")

To activate brush motor, push brush position switch to down position. Brush Motor and solution flow will activate when the traverse buttons are pushed. To shut brush motor off, hold brush position switch in up position until actuator stops.

Vacuum Motor Switch (See Figures 4 & 5, pg. 11)

To activate vacuum motor, lower squeegee handle. Handle has two positions. Lowest position is operating position and the middle position is transport to clear vacuum hose.

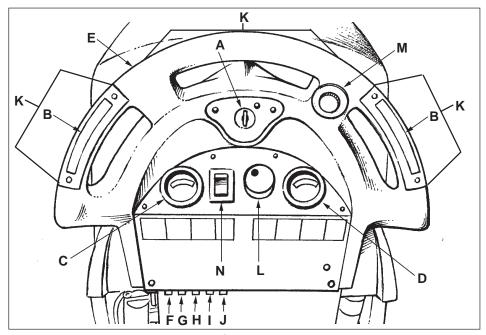


Figure 3

#### **Machine Controls and Features**

#### Squeegee Lift Handle, See Figures 4 and 5

The squeegee lift handle is located below the control handles in the center. It is used to raise or lower the squeegee. The vac motor is turned on when the handle is lowered to either the first or last position.

#### Float Shut Off, See Figure 6

The shut-off switch for the vac motor is located in the recovery tank. It automatically turns off the vac motor when the recovery tank is full. NOTE: If excessive foaming occurs in recovery tank, defoamer must be added. Damage to vacuum motor could result from foam.

Parking Brake (Optional), See Figure 7
NOTE: Parking Brake must be used if operating machine on greater than 2% gradient.
The parking brake prevents movement of the machine.



The brake is located on the right hand side of the machine on the transaxle motor. Turn the key switch off or disconnect the power to the battery to apply the brake.

while the machine is moving.

There is a mechanical lever located on the brake. This lever is an override. To manually release the brake, rotate the lever clockwise. To return the brake to normal or to apply the brake, rotate the lever up counter clockwise.

NOTE: If the lever is left in the override position, the brake will not function with the key switch, and the machine will not operate.

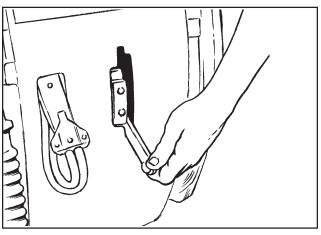


Figure 4

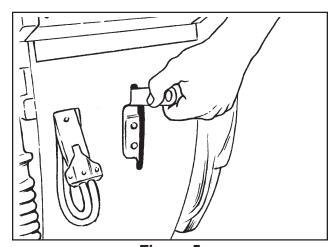


Figure 5

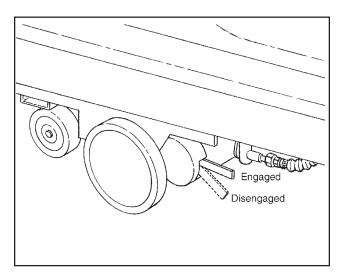


Figure 7

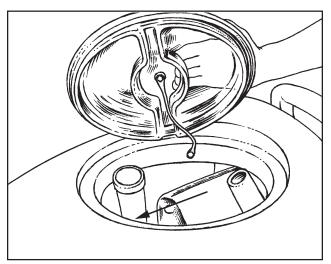


Figure 6

#### **How To Install The Batteries**

The Encore machines uses either two 12-volt batteries or four - 6 volt batteries. The batteries are located in the battery compartment under the recovery tank.

To install the batteries, follow this procedure:

- 1. Turn machine off. Set brake (if equipped).
- 2. Make sure recovery tank is empty.
- 3. Tip up the recovery tank until it locks in the full open position. See figure 8A.

CAUTION: Before raising the tank, be sure

tank is empty.

**NOTE:** There is an intermediate position available for holding the recovery tank open for charging batteries. See figure 8B.



WARNING: Do not operate or perform mainte-

nance on the machine while the recovery tank is in the intermediate position. The tank can be accidentally bumped and it may slam shut.

4. Place the batteries in the tray as shown in figure 8C.



WARNING: The batteries are heavy. Lifting

batteries without help could result in an injury. Get help to lift the batter-

ies.



WARNING: Working with batteries can be

dangerous. Always wear eye protection and protective clothing when working near batteries. NO SMOKING!

- Connect the cables between batteries and install long battery cable assembly as indicated. See figure 8C.
- 6. Join the connector from the battery pack to the connector on the control panel. See figure 9.
- 7. Close recovery tank by pulling up on the latch arm and then slowly lowering the tank.

**NOTE:** Charge the batteries before using the machine.

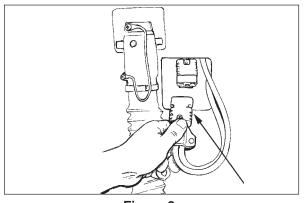


Figure 9

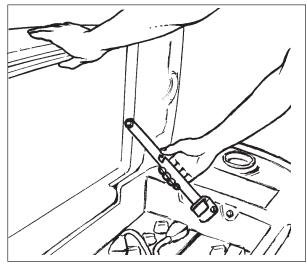


Figure 8A

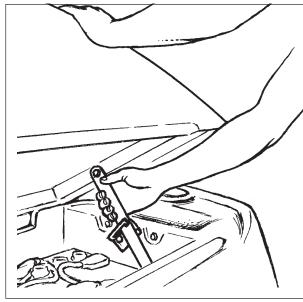


Figure 8B

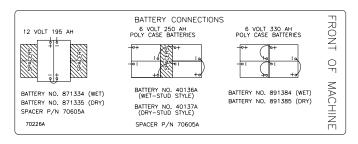


Figure 8C

#### **Battery Maintenance**

The electrical power to operate the machine comes from the storage batteries. Storage batteries need preventative maintenance.



WARNING:

Working with batteries can be dangerous. Always wear eye protection and protective clothing when working near batteries. NO SMOKING!

To maintain the batteries in good condition, follow these instructions:

1. Keep the electrolyte at the correct level. The correct level is between 1/4" (1/2 cm) below the bottom of the tube in each cell and above the tops of the plates. Check the level of the electrolyte each time you charge the batteries. See figure 10.

NOTE: Check the level of electrolyte prior to charging the batteries. Be sure the plates in each cell are covered with electrolyte before charging. Do not top off the cells prior to charging the battery. Electrolyte expands during charging. As a result, the electrolyte could overflow from the cells. Always top off the cells with distilled water after charging.



A CAUTION: Irreversible damage will occur to the batteries if electrolyte does not cover the plates. Keep the electrolyte at the correct level.



A CAUTION: Machine damage and discharge across the tops of the batteries can occur if the batteries are over filled. Do not fill the batteries up to the bottom of the tube in each cell. Wipe any acid from the machine or the tops of the batteries. Never add acid to a battery after installation.



A CAUTION: Batteries must be refilled with distilled water only. Do not use tap water as it may contain contaminants that will damage batteries.

2. Keep the tops of the batteries clean and dry. Keep the terminals and connectors clean. To clean the top of the batteries, use a damp cloth with a weak solution of ammonia or bicarbonate of soda solution. To clean the terminals and connectors, use a terminal and connector cleaning tool. Do not allow ammonia or bicarbonate of soda to get into batteries.

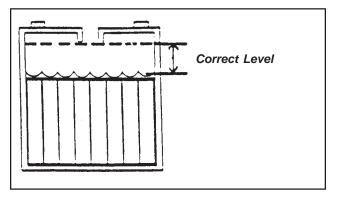


Figure 10

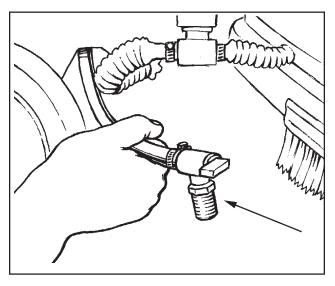


Figure 11

- 3. Keep the batteries charged.
- 4. To drain battery compartment: (See figure 11)
  - a. Always wear protective eye protection and protective clothing.
  - b. Add a weak solution of ammonia or bicarbonate of soda solution to battery compartment to neutralize any spilled acid.
  - c. Pull drain hose out from under transaxle.
  - d. Place hand behind flange and open valve.
  - e. When empty, close valve.
  - f. Replace valve and drain hose on top of transaxle.
  - g. Neutralize any acid spills with ammonia or bicarbonate of soda.

#### **How To Charge The Batteries**

WARNING: Charging the batteries in an area without adequate ventilation could result in an explosion. To prevent an explosion, charge the batteries only in an area with good ventilation.



WARNING: Lead acid batteries generate gases which could explode. Keep sparks and flames away from batteries. NO **SMOKING!** 



WARNING: Failure to disconnect the AC plug from the wall receptacle before connecting or disconnecting the DC connector on the charger could result in an explosion. Always disconnect the AC plug from the wall receptacle before connecting or disconnecting the DC connector on the charger.

To charge the batteries, follow this procedure:

- 1. Put the charger on a flat surface. Make sure the vents on the sides are at least two inches away from walls and other objects. Make sure there are no objects near the vents on the bottom of the
- 2. When key is off, brake is activated. Make sure key is off.
- 3. Before charging the batteries the battery compartment needs to be vented. To vent compartment, tip up the recovery tank until it locks in either of the two open positions. See figure 12. To close the tank, pull up on the latch arm and then slowly lower the tank to the closed position.



CAUTION: Before raising tank, be sure tank is empty.

**NOTE:** There is an intermediate position available for holding the recovery tank open for charging batteries. See figure 13.



WARNING: Do not operate or perform maintenance on the machine while the recovery tank is in the intermediate position. The tank can be accidentally bumped and it may

slam shut.

To place the tank in the intermediate position, pull up on the latch arm while raising the recovery tank until it slips into the knotch area of arm. While pulling up on the latch arm, carefully lower the recovery tank making sure it is securely locked into place. See figure 13. To release the latch arm, tip the recovery tank up slightly while pushing down on the latch arm and then slowly lower the tank.

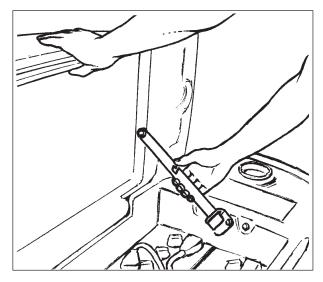


Figure 12

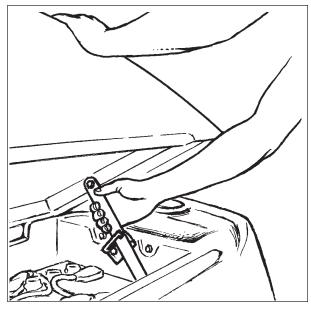
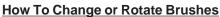


Figure 13

- 4. Disconnect the battery pack connector from the control housing connector. See figure 14A.
- 5. Connect the DC connector on the charger to the battery pack connector. See figure 14B.
- 6. Connect the charger to a properly grounded single phase (3-wire) wall receptacle having the input voltage, frequency, and ampere capacity specified on the nameplate of the charger.

For more information on the use of the charger, read the instructions supplied with the charger.



To install or rotate brushes on the machine, follow this procedure:

- 1. Turn the key switch "ON".
- 2. Raise the brush head by pressing and holding the brush switch until brush head is in full up position,
- 3. Turn the key switch "OFF" and remove the key.
- 4. Go to the front of the machine and remove thumb screw from brush door (figure 15).
- 5. Lower door approximately ½ inch and slide door and bearing assembly off shaft (figure 16).
- 6. Remove brush spacer and brush by sliding off of brush shaft (figure 17).
- 7. Rotate brush or replace.
- 8. Slide brush on shaft and rotate slowly until drive pins are lined up with brush slots. Push brush all the way in.
- 9. Install brush spacer on shaft.
- 10. Slide brush door bearing assembly on shaft.
- 11. Raise door and install thumb screw.

DANGER: Operating a machine that is not completely or fully assembled could result in injury or property damage. Do not operate this machine unless it is completely assembled. Inspect the machine carefully before operation.

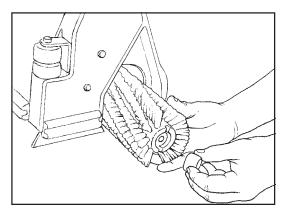


Figure 17

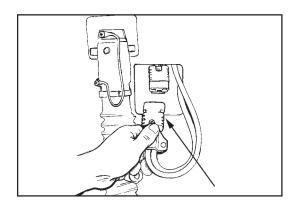


Figure 14A

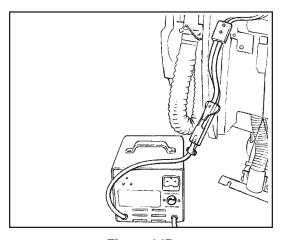


Figure 14B

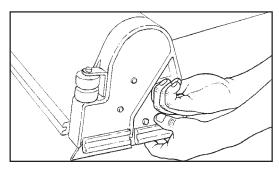


Figure 15

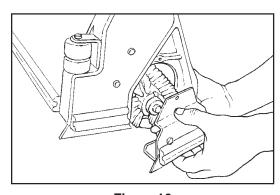


Figure 16

#### **How To Operate The Machine**



DANGER: Operating a machine that is not completely or fully assembled could result in injury or property damage. Do not operate this machine unless it is completely assembled. Inspect the machine carefully before operation.

#### **How To Operate The Squeegee**

The squeegee wipes the floor while the vacuum motor removes the dirty solution from the floor. Use your hand to lower or raise the squeegee handle. To operate the squeegee, follow this procedure:

- 1. To lower the squeegee and start the vacuum motor, move the squeegee lever to the right and down. See figure 18.
- 2. To raise the squeegee, lift the squeegee lever up. See figure 19.

**NOTE:** The center position lets the vacuum motor continue to run with the squeegee off the floor to avoid drips and also allows you to back up the machine.

#### **How To Fill The Solution Tank**

The solution tank can be filled in the front or through the clear drain hose at the rear of the machine (See figure 20). To fill the solution tank follow this procedure:

- 1. Add a cleaning chemical to the solution tank. For the correct amount of chemical, follow the directions shown on the container.
- 2. Fill the solution tank with water. When filling machine in the front with a hose, position hose inside the fill screen as shown in figure 20A.

When filling machine from the rear, position clear drain hose against bracket and insert hose as shown in figure 20B Solution level can be viewed from the back of the machine.



MARNING: Water solutions or cleaning materials used with this type of machine can leave wet areas on the floor surface. These areas can cause a dangerous condition for the operator or other persons. Always put CAUTION signs near the area you are cleaning.



WARNING: Machines can ignite flammable materials and vapors. Do not use with or near flammables such as gasoline, grain dust, solvents and thinners. Only use a cleaning concentration recommended by the chemical manufacturer.



WARNING: Clarke Technology recommends a maximum water temperature of 120°F (49°C).

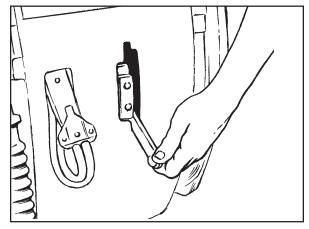


Figure 18

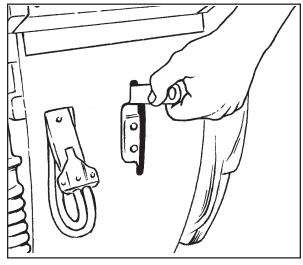


Figure 19

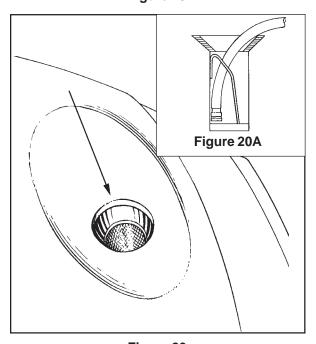


Figure 20

#### **How To Operate The Machine**

#### **Operating The Machine**

NOTE: Put the machine in the lowest traverse speed setting. Use the machine in an area that has no furniture or objects until you can do the following:

- Move the machine in a straight direction, forward and backward.
- Stop the machine safely.
- Turn the machine both left and right and return to a straight direction.

To move the machine, follow this procedure:

- Release the parking brake (if equipped with machine).
- 2. Turn the key switch to the "ON" position
- 3. Raise the brush to the highest setting.
- 4. Raise the squeegee.
- When either the left or right forward/reverse switches (figure 21, item A) are pushed in, the machine will go forward.
- Control the speed of traverse by using the traverse speed control knob (figure 21, Item C).
- 7. To stop, release the forward/reverse switch.
- To reverse the machine, push in the white reverse switch (figure 21 item B) and either the right or left forward/ reverse switch (figure 21 item A) at the same time.
- To stop, release the forward/reverse switch.
- 10. To turn the machine, push the rear of the machine to the side.
- 11. When you stop the machine, turn the key switch "OFF", remove the key and set the parking brake (if equipped).

#### **How To Clean A Floor**

WARNING: Water solutions or cleaning materials used with this type of machine can leave wet areas on the floor surfaces. These areas can cause a dangerous condition for the operator or other persons. Always put CAUTION signs near the area you are cleaning.

To clean a floor follow this procedure:

- 1. Set the parking brake (if equipped with machine.)
- Put the water and a cleaning chemical in the clean solution tank.
- 3. Release the parking brake (if equipped with machine.)
- 4. Turn the key switch "ON".
- 5. Lower the squeegee.
- Activate the brush switch until correct pressure is achieved.

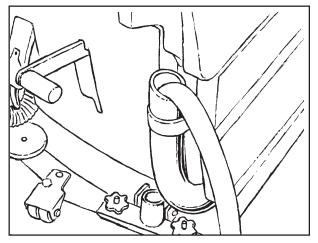


Figure 20B

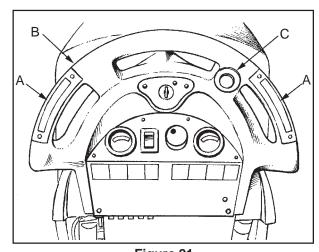


Figure 21

#### **How To Operate The Machine (cont)**



WARNING: This machine is capable of maximum head pressure with worn brushes. With this feature, there is the possibility of exceeding the recommended brush pressure on new brushes. This will either create reoccurring circuit breaker tripping or the possibility of lost traction and control. The brush switch should be activated to accomplish only enough brush pressure for the job. This will allow longer battery life and cleaning time.

NOTE: Keep the machine moving when the brushes are rotating on the floor. Pre-wet brushes or keep light pressure on brushes until solution flow is adequate to keep brushes from scratching the floor.

To pre-wet brushes you should first turn the speed knob to the lowest setting. Then lower brushes until brushes are just touching the floor. Activate the forward/reverse switch to start motor and solution flow.

- 7. Turn the solution knob to the right to activate the flow of solution. Adjust the flow of clean solution to the flow desired.
- 8. Move the machine across the floor in the forward direction.
- 9. Make a 180° turn.

**NOTE:** When you make more passes across the floor, let the brush clean approximately 2 inches (5 cm) of the area already cleaned by the brush.

NOTE: During most cleaning procedures, apply and remove the solution in one operation.

#### **How To Clean A Very Dirty Floor**

To clean a very dirty floor, follow this procedure:

- 1. Apply solution to the floor.
- 2. Do not lower the squeegee. This will keep the vacuum motor off.
- 3. Lower the brush or pad and scrub the floor.
- 4. Scrub the floor again with additional solution and lower the squeegee.
- 5. Pick up all the solution with the squeegee.

WARNING: Maintenance and repairs must be

done by authorized personnel only.

WARNING: Always empty the solution tank and

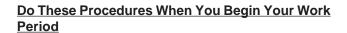
recovery tank before doing any

maintenance.

WARNING: Keep all fasteners tight.

#### These Maintenance Procedures Must Be Done **Every Day**

Keep the machine clean, it will need fewer repairs and have longer life.



- 1. Turn off key switch.
- 2. Disconnect AC power from battery charger (follow charger instructions).
- 2. Disconnect the plug on the battery charger from the battery pack connector.
- 3. Join the connector from the batteries to the control panel cable connection. See figure 22.
- 4. Make sure the Screen filter over the vacuum motor is clean and in position. See figure 24.
- 5. Make sure the recovery tank lid is on correctly. See figure 23, Item A.
- 6. Make sure the valve on the recovery drain hose is clean. Tightly close the valve.
- 7. Make sure the brushes are in position and installed correctly.
- 8. Make sure brush housings and skirts are in position on the brush head.
- 9. Check the installation of the squeegee and squeegee hose.
- 10. Make sure the solution drain/level indicator hose is secure on the storage mount on the rear of the machine.

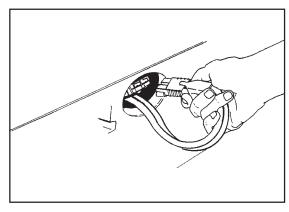


Figure 22

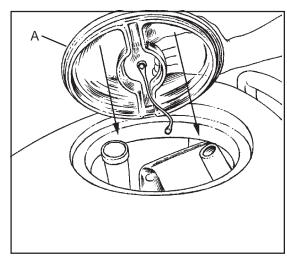


Figure 23

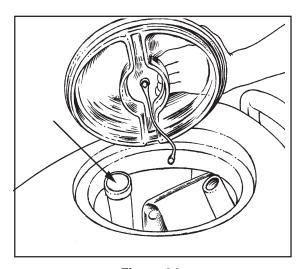


Figure 24

#### Do These Procedures When You End Your Work

- Drain the solution tank (Figure 25) and the recovery tank (Figure 26). To drain the tanks, follow this procedure:
  - a. Turn the key switch "OFF".
  - Remove the drain hose from the back of the machine.
  - c. Put the end of the hose over a drain or bucket.
  - d. Recovery Tank:
    - 1.) Turn the valve handle to the left. Pull the handle out to open the drain (Figure 27).

# NOTE: Have the opening in the side of the valve away from you when you open the valve.

2.) To open the valve completely, turn the handle to the right. Pull the handle out of valve (Figure 28).

#### Solution Tank:

When hose is lowered to water level, water will flow.

- 2. Flush the tanks. To flush the tanks, put clean water in the tank through the opening on top of the tank.
- 3. If a tank or drain hose has an obstruction, use a pressure water hose to flush the tank or hose. Put the water hose into the drain hose.
- 4. Leave the tanks and the recovery drain valve open to dry in the air.
- 5. Check the squeegee blade. Use a cloth to clean the squeegee blade. If the squeegee blade is damaged or worn, turn or replace the blade.
- 6. Check and clean the solution lid gasket. Use a mild cleaning solution and rinse the parts in clean water.
- 7. The debris tray needs to be emptied regulary to prevent over flow. To remove the debris tray from the machine, follow this procedure (see figure 29):
  - a. Go to the left side of the machine, to the rear of the cylindrical brush head.
  - b. Grab the end of the tray with the left hand and the center of the tray with the right hand.
  - c. Lift center of tray with right hand and slide tray out with left hand.
  - d. Empty tray and clean before sliding tray back in. Make sure upper and lower slides are engaged.

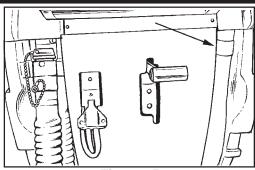


Figure 25

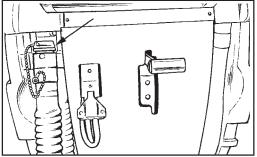


Figure 26

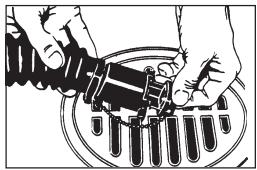


Figure 27

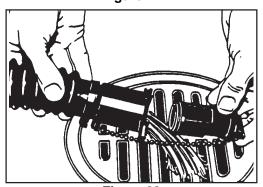


Figure 28

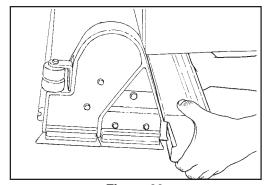


Figure 29

8. Check the batteries and if necessary add distlled water after charging. The correct level is within 1/4 inch (1/2 cm) of the bottom of the tube in each cell.

ACAUTION:

Tap water may contain contaminants that will damage batteries. Batteries must be refilled with **DISTILLED WATER ONLY.** 

WARNING: Lead acid batteries generate gases which can cause an explosion. NO SMOKING. Always wear eye protection and protective clothing when working near batteries.

- 9. Use a clean cloth and wipe the surface of the machine.
- 10. Charge the batteries. See the instruction in the section of this book called "How To Charge The Batteries".

#### Maintenance Procedures To Be Done Every Week:

MARNING: Maintenance and repairs must be done by authorized personnel only. Always empty the solution tank and the recovery tank before doing any maintenance. Keep all fasteners tight.



MARNING: Always wear eye protection and protective clothing when working near batteries. Do not put tools or other metal objects across the battery terminals or the tops of the batteries.



To prevent damage to the machine, and discharge across the tops of the batteries, do not fill the batteries above the bottom of the tube in each cell. Wipe any acid from the machine or the tops of the batteries. Do not add acid to battery after installation.

NOTE: Always turn off key switch before servicing the machine.



MARNING: Always wear eye protection and protective clothing when working near batteries. NO SMOKING!

1. To inspect batteries, tip up recovery tank until it locks in the full open position. See figure 30. To close the tank, pull up on the latch arm and then slowly lower the tank to the closed position.

A CAUTION: Before raising the tank, be sure tank is empty.

**NOTE:** There is an intermediate position available for holding the recovery tank open for charging batteries. See figure 31.

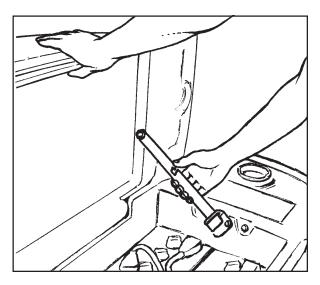


Figure 30

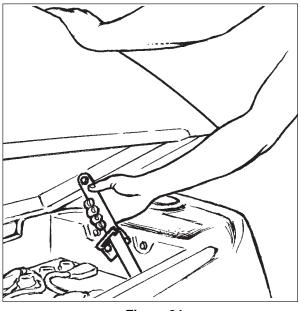


Figure 31

MARNING: Do not operate or perform maintenance on the machine while the recovery tank is in the intermediate position. The tank can be accidentally bumped and it may slam shut.

- 2. Disconnect the batteries. Use a cloth and a solution of ammonia or bicarbonate of soda to wipe the top of the batteries. Clean the battery terminals. Reconnect the batteries.
- 3. Check the hoses for leaks, obstructions and other damage.
- 4. Use a grease gun to lubricate the dual casters. See figure 32.
- 5. Check the brush drive belts for proper tension. Belts must be tensioned properly to prevent slipping. To tighten the belts, follow this procedure:
  - a. Remove belt cover by removing screws.
  - b. Loosen the 2 screws on either side of the motor pulley.
  - c. Use a small prybar or large screwdriver to pry the motor upward to acheive correct belt tension. Pry on the motor close to where the motor contacts the brush head casting (see figure 33, A).
  - d. Hold tension and tighten 2 screws (see figure 33,
  - e. Replace belt cover.

#### Maintenance For The Squeegee

To remove the squeegee, follow this procedure:

- 1. Remove the squeegee assembly by loosening the two knobs that attach the squeegee to the machine. Pull the squeegee assembly off. See figure 34.
- 2. Inspect the squeegee blade.
- 3. If the blade is worn, turn the blade so that a new edge is in the wiping position.
- 4. Reinstall squeegee assembly on the machine.

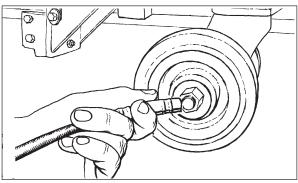


Figure 32

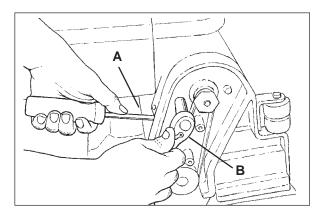


Figure 33

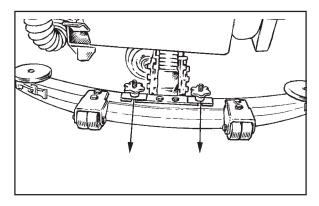


Figure 34

#### Maintenance cont.

#### **How To Adjust The Squeegee**

The following adjustments are set at the factory, however they may require slight adjustment.

#### **Adjusting Squeegee Tilt:**

The tilt of the squeegee causes the rear blade to raise up in the center or on the ends, depending on which direction the tilt is changed. For tilt adjustment, refer to figure 35. Loosen left and right screw "X". In order to bring the blades down in the center, tip "Y" down. To bring both ends down, tip "Y" up. Make very small adjustments and try it until a uniform flare is achieved.

#### **Adjusting Squeegee Blades:**

When properly installed the front blade should be approximately 0.06" (1.5mm) above the rear blade. See figure 36.

WARNING: Maintenance and repairs must be done by authorized personnel only.

MARNING: Electrical repairs must be done by authorized personnel only.

Consult your Clarke Technology Authorized Service Person to do the service procedures.

Use only genuine Clarke Technology parts.

#### How to Center or Offset the Brush Head

The brush head on the Encore L26 can be centered or offset 1 inch to the right side of the machine. To center or offset the brush head, follow this procedure:

Recommended tools: 3/8" drive rachet, 3" extension and 9/16" socket.

A CAUTION: Before offsetting the brush head, be sure that the recovery tank is empty of solution. Follow the instructions on page 20 on how to drain the recovery tank.

- 1. Turn the key switch "ON".
- 2. Raise the brush head by pressing and holding the brush switch until the brush head is in its full up position.
- 3. Turn the key switch "OFF" and remove the key.
- 4. Tip up the recovery tank until it locks in the full open position.
- 5. Go to the front of the machine and unlatch the front cover and swing cover open.

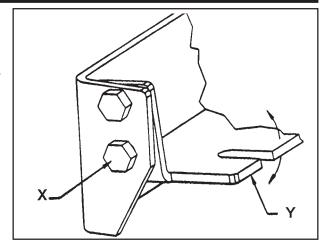


Figure 35

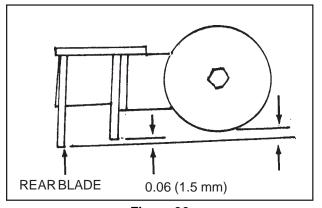


Figure 36

#### Maintenance cont.

- Locate the four mounting studs on the brush head bracket. See figure 37. The top two mounting nuts can be accessed through the top of the solution tank. The lower two can be accessed through the front. Loosen the four mounting nuts 2 to 3 turns counterclockwise. NOTE: Do not remove mounting nuts.
- 7. The brush head assembly can slide to the right side by one inch or placed back into the center. Slide the brush head assembly all the way to the ends of the slots for the desired position. This insures that the head operates straight up and down.
- 8. After repositioning the brush head, tighten nuts securely to approximately 236 inch-lbs.
- 9. Close the front cover.
- 10. Close the recovery tank.

#### **How to Level the Cylindrical Brush Head**

The brush head on the Encore L26 is level when shipped from the factory. If during use it becomes necessary to relevel the head from side to side, follow this procedure:

- 1. Move the machine to a level area of the floor surface.
- 2. Turn key switch "OFF".
- 3. Lossen the 4 mounting nuts shown in figure 37, by following steps in the procedure above (How to Center or Offset the Brush Head).
- 4. Turn the key switch on and lower the head, until the full weight of the head is on the floor.
- 5. Turn the key switch "OFF".
- 6. After determining the brush head is level with the floor, tighten nuts securely to approximately 236 inch-lbs.
- 7. Close front cover and recovery tank.

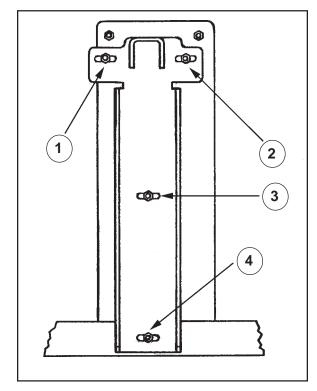


Figure 37

#### Clarke Technology Encore L26 Cylindrical Accessories - 3/02

#### **A**CCESSORIES

| <u>Description</u>        | Part No. |
|---------------------------|----------|
| Power Wand System Kit     | 10150A   |
| Clarke Care Kit           | 14607A   |
| 39" Squeegee Assembly     | 10068A   |
| 32" Squeege Assembly      | 10129A   |
| Poly Dur Protectant       | 50478A   |
| Kit, Grease Gun           | 55420A   |
| Kit, Low Voltage Shut-Off | 14097A   |
| Brake Kit Assembly "L"    | 10072A   |
| Accessory Bag             | 30070A   |
| Hour Meter Kit            | 10656A   |
| Hard Caster Assembly      | 50968A   |
| Kit, Solution Fill        | 10177A   |

#### **Brushes:**

| Size | <u>Description</u> | Part No. | <u>Used For</u>               |
|------|--------------------|----------|-------------------------------|
| 26"  | Polyproplene       | 30176A   | General Scrubbing Hard Floors |
| 26"  | Clean Grit         | 30178A   |                               |
| 26"  | Super Grit         | 30179A   |                               |
| 26"  | Nylon Soft         | 30177A   |                               |

#### Squeegee Blades:

| Description                   | 39" Assembly |
|-------------------------------|--------------|
| Blade, Rear - Gum Rubber      | 30069A       |
| Blade, Rear - Nitrile Solid   | 30082A       |
| Blade, Rear - Ribbed Orange   | 30086A       |
| Blade, Front - Ribbed Natural | 30091A       |
| Blade, Front - Slit Grout     | 30080A       |
| Blade, Front - Ribbed Orange  | 30084A       |

# NOTE



# **ENCORE L26 Cylindrical**

Section II

Parts and Service Manual

#### HOW TO CORRECT PROBLEMS IN THE MACHINE

| PROBLEM  | CAUSE  | ACTION  |  |
|--|--|---|--|
| There is no solution flow.                         | The solution tank is empty.  | Fill the solution tank.   |  |
|  | The solution valve is closed.  | Open the solution valve.  |  |
|  | There is an obstruction in the solution hose or filter.                        | Remove the obstruction from the hose or filter.                                       |  |
|  | The solution valve or electric wiring is damaged.                              | Repair or replace the valve or the electric wiring.                                   |  |
|  | The solution module is defective.  | Replace solution module   |  |
| The solution flow does not stop.                   | The solution valve is open.  | Close or Clean the solution valve.  |  |
|  | The solution valve or wiring is damaged.                                       | Repair or replace the valve and the wiring.   |  |
|  | The solution valve is dirty  | Clean the solution valve.   |  |
|  | There is a damaged seat and washer in the solution valve.                      | Replace the seat and washer.  |  |
|  | The solution module is defective.  | Replace solution module.  |  |
| The machine does not remove all the                | The squeegee is up.  | Lower the squeegee.   |  |
| water from the floor.                              | The squeegee tilt is not correct.  | To adjust See Figure 11, page 23.   |  |
|  | The recovery tank is full.   | Drain the recovery tank.  |  |
|  | The screen filter is dirty.  | Clean the screen filter.  |  |
|  | There is an obstruction or damage in the squeegee, squeegee hose or standpipe. | Remove the obstruction or repair the damage.  |  |
|  | The vacuum motor is not running.   | Check for tripped breaker. Have an authorized service person make repairs.            |  |
|  | The squeegee hose is disconnected, or damaged                                  | Check and connect hose.   |  |
|  | The squeegee blade is damaged, worn, or incorrectly installed.                 | Turn or replace the squeegee blade.<br>Correctly install the squeegee blade.          |  |
|  | The gaskets on the cover of the recovery tank are damaged.                     | Replace the gaskets.  |  |
|  |  |   |  |
| The batteries do not give the normal running time. | The battery terminals are dirty or damaged.                                    | Clean the terminals and connectors. Replace the damaged cables. Charge the batteries. |  |
|  | The electrolyte level is too low.  | Add distilled water to each cell and charge the batteries.                            |  |
|  | The batteries are not fully charged.   | Charge the batteries for a full 16 hour charge.                                       |  |
|  | The charger is damaged.  | Have an authorized service person repair the charger.                                 |  |
|  | The battery is defective.  | Check voltage of each cell while discharging.   |  |
|  | The batteries are disconnected.  | Connect the batteries.  |  |
|  | Brush is in heavy scrub setting.   | Adjust Pressure.  |  |
|  |  |   |  |
|  |  |   |  |

| PROBLEM                   | CAUSE  | ACTION  |  |
|---------------------------|--|---|--|
| The cleaning is not even. | The scrub brush or pad is worn.                                      | Replace the scrub brush or pad.   |  |
|                           | There is damage to the brush assembly, caster or the solution valve. | Have an authorized service person make the needed repairs.  |  |
|                           | The brush motor is not running                                       | Check for tripped breaker. Reset. Check for loose connections.  |  |
|                           | The solution level is low.   | Fill the solution tank.   |  |
|                           |  | NOTE: If the problem continues consult an authorized service person.                                  |  |
| The machine does not run. | The machine loses power.   | Reset the circuit breaker.  |  |
|                           | Key or switch is off.  | Turn key or switch on.  |  |
|                           | Batteries are unplugged. Battery terminals are dirty.                | Check the battery connections.  |  |
|                           | Batteries are discharged   | Check battery gauge and recharge NOTE: If the problem continues consult an authorized service person. |  |

# NOTE

#### ALTO® PRODUCT SUPPORT BRANCHES

#### U.S.A. Locations

#### **CORPORATE OFFICE**

ALTO U.S. Inc., St. Louis, Missouri 16253 Swingley Ridge Road, Suite 200 Chesterfield, Missouri 63017-1725

#### **PRODUCTION FACILITIES**

ALTO U.S. Inc., Springdale, Arkansas 2100 Highway 265 Springdale, Arkansas 72764 (479) 750-1000 Customer Service - 1-800-253-0367 Technical Service - 1-800-356-7274

ALTO U.S. Inc., Bowling Green, Ohio 43402 1100 Haskins Road

#### **SERVICE FACILITIES**

ALTO U.S. Inc., Elk Grove, Illinois 60007 2280 Elmhurst Road (847) 956-7900

ALTO U.S. Inc., Denver, Colorado 80204 1955 West 13th Ave. (303) 623-4367

ALTO U.S. Inc., Houston, Texas 77040 7215 North Gessner Road 713-937-7717

#### **SERVICE AND SALES FACILITY**

ALTO U.S. Inc., Madison Heights, Michigan 48071-0158 29815 John R. (810) 544-6300

ALTO U.S. Inc., Marietta, Georgia 30066 1455 Canton Road (770) 973-5225

#### **SALES AND DISTRIBUTION CENTER**

ALTO U.S. Inc., Secaucus, New Jersey 07094 74 Henry Street (201) 864-5503

# CLARKE TECHNOLOGY AMERICAN SANDERS TECHNOLOGY A.L. COOK TECHNOLOGY

**Customer Service Headquarters and Factory** 

2100 Highway 265 Springdale, Arkansas 72764 (479) 750-1000

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#### **PRODUCTION FACILITIES**

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#### SALES SUBSIDIARIES

ALTO Canada Ltd., Rexdale Ontario 24 Constellation Ct. (416) 675-5830

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#### CLARKE TECHNOLOGY LIMITED U.S. WARRANTY

This Clarke Technology Industrial/Commercial Product is warranted to be free from defects in materials and workmanship under normal use and service for a period of three years from the date of purchase, when operated and maintained in accordance with Clarke Technology's Maintenance and Operations instructions. Motors must be inspected for carbon motor brush wear at six-month intervals by an authorized Clarke Technology repair station. Failure to comply with the sixmonth inspection requirement or failure to replace worn motor brushes identified during the inspection will void the warranty on the motors. Cost of the six-month inspection and replacement of carbon motor brushes is the responsibility of the purchaser. In the event of a warranty claim on the motors, proof of inspection and any required motor brush replacement must be provided.

This warranty is extended only to the original purchaser for use of the product. It does not cover normal wear parts such as electrical cable, rubber parts, hoses and motor brushes.

Clarke Technology's liability under this warranty is limited to repair of the product and/or replacement of parts and is given to purchaser in lieu of all other remedies, including INCIDENTAL AND CONSEQUENTIAL DAMAGES.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SPECIFIED HEREIN. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. NO WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY, SHALL BE IMPLIED. A warranty registration card is provided with your Clarke Technology product. Return the card to assist Clarke Technology in providing the performance you expect from your new floor machine.

If a difficulty develops with the product, you should: a) Contact the nearest authorized Clarke Technology repair location or contact the Clarke Technology Service Operations Department, 2100 Highway 265, Springdale, Arkansas 72764, for the nearest authorized Clarke Technology repair location. Only these locations are authorized to make repairs to the product under this warranty. (b) Return the product to the nearest Clarke Technology repair location. Transportation charges to and from the repair location must be prepaid by the purchaser. Clarke Technology will repair the product and/or replace any defective parts with out charge within a reasonable time after reciept of the product.

ALTO U.S. Inc., 2100 Highway 265, Springdale, Arkansas 72764.

#### **BATTERY WARRANTY**

In addition to the items above, any original equipment Clarke Technology Battery which becomes unserviceable under normal use within a period of ninety (90) days from date of sale to the original user will be repaired or replaced with one of equal specification at our option, F.O.B. any authorized Clarke Technology Sales or Service Branch, with no charge to the user, except transportation costs. After expiration of the above ninety (90) day period, any battery which fails under normal use will be adjusted to the original user with a new battery of equal specification on an eighteen (18) months pro rate basis from the date of purchase. Adjustment will be determined using the then current list price, plus transportation costs. Warranty is rendered null and void if battery is not kept filled to the proper level with DISTILLED WATER.

# CLARKE TECHNOLOGY: POLYDUR® AUTOMATIC SCRUBBER SOLUTION AND RECOVERY TANK EIGHT-YEAR U.S. GUARANTEE

Your new Clarke Technology Encore L26 has polydur Solution and Recovery Tanks. Polydur is a rotationally molded, low-density linear polyethylene that won't crack or dent, and withstands most corrosives and temperature extremes. Clarke Technology backs up your Polydur tanks with an eight-year guarantee. If a tank breaks or leaks under normal use within eight years of the date of purchase, it will be replaced free.

#### CLARKE TECHNOLOGY UNIBODY FRAME EIGHT-YEAR U.S. WARRANTY

Clarke Technology warranties the frame of the Encore L26 for a period of eight years against defects in materials and workmanship under normal use and service.

CLARKE TECHNOLOGY reserves the right to make changes or improvements to its machine without notice.

Always use genuine ClarkeTechnology Parts for repair.



CLARKE TECHNOLOGY 2100 Highway 265 Springdale, Arkansas, 72764